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Testimony of the University of Connecticut Health Center Regarding Raised Bill No. 1050 An Act Concerning the Establishment of an Academic Detailing Program

Joint Hearing of the Committees on Public Health, Insurance and Real Estate and Human Services March 2, 2009

Senators Doyle, Crisco, and Harris; Representatives Walker, Fontana, and Ritter and members of the Human Services, Insurance and Real Estate, Public Health Committees, my name is Charles Huntington. I am here today as Associate Dean for Continuing and Community Education of the University of Connecticut School of Medicine. Until last August, it was my pleasure to have served as Associate Director of the Connecticut AHEC Program. On behalf of the University of Connecticut Health Center I am pleased to support Raised Bill No. 1050, which would establish an academic detailing program as a shared responsibility of the Connecticut Department of Health, the University of Connecticut Schools of Medicine and Pharmacy and the Yale University School of Medicine.

In addition providing evidence to support the development of an academic detailing program, I wish to respectfully suggest two changes in the proposed authorizing language that will improve the effectiveness and efficiency of the program:

- Expand the purpose of the academic detailing program to include the appropriate and cost-effective care of patients with high cost acute and chronic illnesses (Section 1(a))
- Expand the list of licensed providers who may serve as academic detailers to include advance practice registered nurses and physician assistants (Section 1(b))

I conclude this testimony with a discussion of a proposal for a permanent, comprehensive academic detailing program at the University of Connecticut Health Center. This proposal, which dates from 2006, is offered with an important qualification. As you are aware, the Health Center is currently facing significant deficits due to structural financial problems. Resources that could be assigned or reassigned to a mandate for an academic detailing program do not exist. Such a program would require new and ongoing funding to establish and maintain. With the appropriate funding, the University of Connecticut is ready and able to establish an academic detailing program. Based on preliminary work done in 2006 regarding the program described in the attachment, which is similar to what is proposed in Raised Bill No. 1050, the estimated cost in the third year, when the program would be

fully implemented, is nearly $1.1 million, with lesser amounts in the first two years. This budget would have to be updated to reflect today's prices and indirect costs, which currently are at 26 percent.

We are all aware that expanding the availability of health insurance is a costly endeavor. Considering methods to improve the affordability of health care are, therefore, important companions to your consideration of various health insurance proposals. The appropriate and cost-effective use of prescription medications and the promotion of the evidence-based care of high cost acute and chronic illnesses are essential considerations in the context of expanding access to health care. We believe that academic detailing can be an important tool in promoting both the appropriate use of prescription drugs and evidence-based care, and we applaud the committees' consideration of establishing an academic detailing program.

Academic detailing

Academic detailing is a face-to-face educational encounter with office-based clinicians by specially trained representatives. It evolved from observations of pharmaceutical detailing and was originally called "counter detailing."[1]

Although the body of well-designed research on academic detailing is not extensive, the existing evidence suggests that it is relatively effective in producing behavior change.[2] University-based academic detailing has been evaluated in randomized, controlled trials for a number of clinical conditions and found to both improve quality and reduce costs.[3] In addition, clinicians are generally receptive to face-to-face counseling.

Academic detailing is already employed in a number of Connecticut-based programs. Over the past 10 years, the Connecticut Area Health Education Center (AHEC) Program, which is based at the University of Connecticut Health Center, has partnered with the Community Health Center Association of Connecticut on three academic detailing programs. In two of these programs, academic detailers from the AHEC Program worked directly with community health center providers on a wide variety of quality improvement initiatives. In an ongoing program, a faculty member from the University of Connecticut Health Center is working with CHC staff members in regard to their participation in a colorectal cancer screening initiative. Although not labeled as such, the highly successful Easy Breathing program employs an academic detailing approach to recruit and train pediatric practices in the evidence-based care of children with asthma. In addition, the EPIC (Educating Practices in their Communities) Program, which is a partnership of the Child Health and Development Institute, the Connecticut Chapter of the American Academy of Pediatrics and the Connecticut Academy of Family Physicians, utilizes an academic detailing approach to inform pediatricians and their staffs about a variety of critical children's health issues.

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[1] Soumerai SB, Avorn J. Principles of Educational Outreach ('Academic Detailing') to Improve Clinical Decision Making. JAMA 1990; 263: 549-556.

[2] Thomson O'Brien MA, Oxman AD, Davis DA, et al. Educational outreach visits: effects on professional practice and health care outcomes. The Cochrane Database of Systematic Reviews 1997, Issue 4. Art. No.: CD000409. DOI: 10.1002/14651858.CD000409. O'Brien MA, Rogers S, Jamtvedt G, Oxman AD, Odgaard-Jensen J, Kristoffersen DT, Forsetlund L, Bainbridge D, Freemantle N, Davis D, Haynes RB, Harvey E. Educational outreach visits: effects on professional practice and health care outcomes. *Cochrane Database of Systematic Reviews* 2007, Issue 4. Art. No.: CD000409. DOI: 10.1002/14651858.CD000409.pub2.

[3] Soumerai

Characteristics of effective academic detailing programs

Based on a review of the research evidence, an effective academic detailing program embodies the following component activities.

- Identifies the clinical issues of concern based on explicit criteria, such as practice variation, patient outcomes, resource utilization, the availability of clinical guidelines based on systematic reviews of randomized trials with consistent results, and opportunities for improvement.
- Precisely defines areas to be addressed and specific behaviors to be encouraged or discouraged.
- Provides clear, practical alternatives to behavior that is being discouraged.
- Incorporates into program design various "non-scientific" factors that contribute to clinicians' decisions such as attitudes to patients or diseases, habits, peer influences, patient demands, time constraints, and economic incentives.
- Establishes and maintains credibility conferred by an unbiased entity promoting evidence-based guidelines
- Uses health plan administrative and Medicare data to target interventions to high volume physicians relative to the clinical issue being addressed
- Involves opinion leaders and early adopters in the design and implementation of the program.
- Presents both sides of the issue upfront.
- Engages the clinician in a two-way conversation in order to relate the message to the beliefs, needs, values, interests, and learning style of the individual clinician and to elicit clinician concerns about the recommended behavior change.
- Assesses clinician readiness to change and target interventions accordingly.
- Repeats a few major points using both visual and verbal messages
- Reinforces improved behavior with feedback.
- Provides reinforcement in subsequent visits
- Directs incentives to all involved personnel: nurses, receptionists, physicians, PAs, NPs, etc.
- Uses concise, well-illustrated materials that emphasize the main clinical recommendations
- Ensures adequate initial and ongoing training of academic detailers and include role playing of all new messages.
- Completes detailed encounter forms after each visit.

Furthermore, successful academic detailers embody the following characteristics:

- Credibility in the eyes of the targeted providers;
- Inclined to develop strong interpersonal relationships with the targeted providers;
- Able to empathize with the provider's perspective;
- Able to communicate the provider's needs and perspectives to the authors of the clinical guidelines; and
- Able to work with the providers in making independent decisions about the clinical guideline.[4]

Going beyond prescribing practices

Raised Bill No. 1050 can be strengthened by expanding the purpose of the academic detailing program contained in Section 1(a) to include the appropriate and cost-effective care of patients with high cost acute and chronic illnesses.

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[4] Greenhalgh T, Robert G, MacFarlane F, at al. Diffusion of Innovations in Service Organizations: Systematic Review and Recommendations. Milbank Quarterly 2004; 82: 581-629.

Academic detailing has been expanded well beyond the sole purpose of influencing prescribing behavior. Academic detailing, especially when combined with other educational outreach methods, is being used to promote the adoption of evidence-based clinical guidelines. Clinical guidelines are intended to improve the process of health care and outcomes, to reduce practice variation, and to optimize the use of resources. The past two decades have witnessed a rapid growth in the development of clinical guidelines and a pervasive sense of their value to improved quality and cost-effectiveness. The clinical guideline effort is firmly embedded in the medical literature and the minds of practicing physicians. When subjected to rigorous evaluations, the use of clinical guidelines has been shown to improve both the process of care and clinical outcomes.[5] However, the evidence that clinical guidelines have actually been translated into practice suggests that the promulgation of clinical guidelines as a tool to improve physician performance has been insufficient.[6] For example, the results of a chart review indicated that the National Institutes of Health Consensus Statement program was moderately successful in reaching its target audience, but failed to bring about change in physician practice.[7]

Guidelines are a necessary but insufficient strategy for performance improvement.[8] The simple provision of information, even in the form of well-evidenced guidelines, is insufficient in bringing about behavior change.[9] Without being adapted for local use, they cannot be implemented. The magnitude of performance improvement from the use of guidelines varies considerably. Guidelines that are not well-integrated into person-to-person education programs have little practical value.[10]

More recently it has been recognized that the implementation of a clinical guideline requires change at the organizational or practice level as well as individual change. Innovations are more likely to be successfully adopted if they have the following characteristics.[11]

- A clear, unambiguous advantage in either effectiveness or cost-effectiveness.
- Compatibility with the values, norms, and needs of the intended adopters
- Perceived simplicity and ease of implementation. The perceived complexity of an innovation can be reduced through practical experience, demonstrations, and breaking the innovation down into manageable parts.
- Amenable to experimentation by adopters on a limited basis.
- Benefits of the innovation that are clearly visible the intended adopters.
- Amenable to adaptation, refinement, and modification to suit the needs of the intended adopters.
- Outcomes of the innovation are relatively certain and of low risk to the adopter.
- Relevant to the work of the adopter and improves the adopters practice performance.
- The knowledge required to implement the innovation can be transferred from one context to another.

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[5] Grimshaw JM, Russell IT. Effect of Clinical Guidelines on Medical Practice: A Systematic Review of Rigorous Evaluations. Lancet 1993; 342: 1317-1322.
[6] Smith WR. Evidence for the Effectiveness of Techniques to Change Physician Behavior. Chest 2000;118: 8S-17S
[7] Kasecof J, Kanouse DE, Rogers WH, et al. Effects of the National Institutes of Health Consensus Development Program on Physician Practice. JAMA 1987; 258: 2708-2713.
[8] Grimshaw
[9] Smith
[10] Soumerai
[11] Greenhalgh

- Required job changes are few and clear.
- High quality training materials and timely on-the-job training are provided.

The adoption of clinical guidelines by individual providers is only one component of their assimilation into organizations. The adoption of innovations by individuals is heavily influenced by their interpersonal networks. Physicians, for example, tend to operate in informal, horizontal networks that lend themselves to peer influence. Nurses, on the other hand, tend to have more formal, vertical networks, which are more amenable to authoritative decisions. Opinion leaders influence the behavior of their colleagues on the basis of their authority and status, although attempts to harness opinion leaders in planned change efforts have produced only weakly positive results. The progress from considering the adoption of clinical guideline to successfully implementing it is a non-linear process characterized by multiple setbacks and unanticipated events.[12]

Formal dissemination programs are more effective if they:

- Take account of the needs and perspectives of the targeted adopters, particularly the balance of costs and benefits;
- Tailor strategies to the demographic, structural, and cultural characteristics of different subgroups within the targeted organization;
- Craft messages with the appropriate style, metaphors, and images;
- Use appropriate communication channels; and
- Include rigorous evaluation and monitoring of defined process and outcome measures.[13]

A practice organization is more likely to implement an innovative clinical guideline if it is characterized by:

- A large size, maturity, and functionally divided semi-autonomous units;
- Specialized subunits housing particular professional knowledge;
- Reserve resources or capacity;
- A decentralized decision-making structure;
- Leadership that is strong, proactive, inclined toward information sharing, and committed over the long term;
- Well-developed inter-professional teams;
- Clear strategic vision;
- Good managerial relations;
- Visionary staff in key positions;
- A culture conducive to risk taking; and
- Effective data systems.

Organizational readiness to change is enhanced by a widely held perception that the current situation is intolerable. Other factors that improve the chances of the successful assimilation of an innovation include broad staff support, adequate and continuing resources devoted to the adoption effort, and the capacity to evaluate the innovation.

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[12] Ibid
[13] Ibid

A practice's decision to adopt a new clinical guideline is influenced by the intention to do so by comparable practices. The influence of other organizations is tied to the extent to which a practice is networked with other practices.

In my view, the proposed academic detailing program can best benefit the State of Connecticut if its purpose goes beyond the "therapeutic and cost-effective utilization of prescription drugs" and includes the promotion of the evidence-based care of high-cost acute and chronic illnesses. The infrastructure of an academic detailing program that includes this expanded purpose is basically the same as one that also includes the promotion of evidence-based care.

Qualifications of the academic detailers

In a similar vein, the proposed academic detailing program will be afforded additional flexibility if the list of licensed providers who may serve as academic detailers is expanded to include advance practice registered nurses and physician assistants (Section 1(b)). The program will be most effective if full-time academic detailers have the background necessary to quickly master and communicate the most compelling evidence in support of any particular improvement in clinical practice. In addition, being able to match the background and skill set of the academic detailers to the clinical issue and target audience will improve the effectiveness of the program.

Comprehensive academic detailing proposal

Considerable thinking has gone into the development of a permanent, comprehensive academic detailing program at the University of Connecticut Health Center. Attached to this testimony is a copy of a proposal that is based on our reading of the most current literature on influencing changes in provider behavior. The proposal also includes a rigorous evaluation component. While we have as yet been unsuccessful at garnering the resources necessary to implement this proposal, we offer it as a way to provide perspective on the resources that would be necessary to establish an effective program in Connecticut. The cost is not trivial, but we believe that potential payoff in terms of the appropriate and cost-effective utilization of prescription drugs and in preventing costly the sequelae of many acute and chronic illnesses to be far greater.

On behalf of the University of Connecticut Health Center, I wish to thank the Committees for their invaluable leadership in addressing the health needs of Connecticut's citizens. I applaud the introduction of Raised Bill No. 1050 as an important companion to your consideration of expanding the availability of health insurance. I appreciate the opportunity to address Raised Bill No. 1050 and am happy to answer any questions that you might have.

UCHC Academic Detailing Program Proposal

Drafted by
Charles Huntington, MPH, PA
Associate Dean for Continuing and Community Education
December 2006

Advancing the best practices of health care requires the provision of competency-enhancing continuing education to Connecticut's health care professionals. Achieving the ambitious mission requires a substantial rethinking of how the University of Connecticut Health Center seeks to influence changes in clinician behavior and, ultimately, improved health outcomes for the residents of Connecticut. This proposal for an academic detailing program goes well beyond the traditional approaches of continuing medical education. It begins with a brief review of the research on the translation of research into clinical practice. Based on this review it then proposes the creation of a UCHC Academic Detailing Program based on an academic detailer model. Systems theory is offered as a framework for program design, implementation, and evaluation. A program description and budget follow.

Translating research into practice

Clinical guidelines are intended to improve the process of health care and outcomes, to reduce practice variation, and to optimize the use of resources. The past two decades have witnessed a rapid growth in the development of clinical guidelines and a pervasive sense of their value to improved quality and cost-effectiveness. The clinical guideline effort is firmly embedded in the medical literature and the minds of practicing physicians. When subjected to rigorous evaluations, the use of clinical guidelines has been shown to improve both the process of care and clinical outcomes.[1] However, the evidence that clinical guidelines have actually been translated into practice suggests that the promulgation of clinical guidelines as a tool to improve physician performance has often failed.[2] For example, the results of a chart review indicated that the National Institutes of Health Consensus Statement program was moderately successful in reaching its target audience, but failed to bring about change in physician practice.[3]

Guidelines are a necessary but insufficient strategy for performance improvement.[4] The simple provision of information, even in the form of well-evidenced guidelines, is insufficient in bringing about behavior change.[5] Without being adapted for local use, they cannot be implemented. The magnitude of performance improvement from the use of guidelines varies considerably. Guidelines that are not well-integrated into person-to-person education programs have little practical value.[6]

The failure of clinical guidelines to influence physician practice is reminiscent of evidence of the impact of continuing education. A growing body of research evidence suggests that physician performance and to a lesser extent patient outcomes may be positively influenced by CME activities, but the changes are mostly small, occasionally moderate, and rarely large.[7] Continuing education interventions have been characterized as weak (didactic lectures and unsolicited mailed materials), moderately effective (concurrent audit and feedback delivered by peers), or relatively strong (reminder systems, academic

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[1] Grimshaw JM, Russell IT. Effect of Clinical Guidelines on Medical Practice: A Systematic Review of Rigorous Evaluations. Lancet 1993; 342: 1317-1322.
[2] Smith WR. Evidence for the Effectiveness of Techniques to Change Physician Behavior. Chest 2000;118: 8S-17S
[3] Kasecof J, Kanouse DE, Rogers WH, et al. Effects of the National Institutes of Health Consensus Development Program on Physician Practice. JAMA 1987; 258: 2708-2713.
[4] Grimshaw
[5] Smith
[6] Soumerai SB, Avorn J. Principles of Educational Outreach ('Academic Detailing') to Improve Clinical Decision Making. JAMA 1990; 263: 549-556.
[7] Davis DA, Thomson MA, Oxman, AD, et al. Changing Physician Performance: A Systematic Review of the Effect of Continuing Education Strategies. JAMA 1995; 274: 700-705.

detailing, and multiple interventions).[8] The impact of CME activities is not consistent across practitioners, settings, or behaviors. Part of inconsistency may be due to physician readiness to change, their knowledge of the problem, and their understanding of the gap between current practice behavior and desired behavior. A few studies suggest that the impact of continuing education on physician behavior is directly related to the intensity of intervention.[9] CME interventions that were based on identified gaps in performance and included resources to assist physicians in overcoming barriers to change were more likely to succeed.[10] Among the promising CME interventions are reminder systems, academic detailing, the presence of an opinion leader, and multifaceted approaches.

Until recently the dissemination of clinical guidelines has been seen as a linear process involving the individual provider's behavior. More recently it has been recognized that the implementation of a clinical guideline requires change at the organizational or systems level and well as individual change.

Innovations are more likely to be successfully adopted if they have the following characteristics.[11]

- A clear, unambiguous advantage in either effectiveness or cost-effectiveness.
- Compatibility with the values, norms, and needs of the intended adopters
- Perceived simplicity and ease of implementation. The perceived complexity of an innovation can be reduced through practical experience, demonstrations, and breaking the innovation down into manageable parts.
- Amenable to experimentation by adopters on a limited basis.
- Benefits of the innovation that are clearly visible the intended adopters.
- Amenable to adaptation, refinement, and modification to suit the needs of the intended adopters.
- Outcomes of the innovation are relatively certain and of low risk to the adopter.
- Relevant to the work of the adopter and improves the adopters practice performance.
- The knowledge required to implement the innovation can be transferred from one context to another.
- Required job changes are few and clear.
- High quality training materials and timely on-the-job training are provided.

The adoption of clinical guidelines by individual providers is only one component of their assimilation into organizations. The adoption of innovations by individuals is heavily influenced by their interpersonal networks. Physicians, for example, tend to operate in informal, horizontal networks that lend themselves to peer influence. Nurses, on the other hand, tend to have more formal, vertical networks, which are more amenable to authoritative decisions. Opinion leaders influence the behavior of their colleagues on the basis of their authority and status, although attempts to harness opinion leaders in planned change efforts have produced only weakly positive results. The progress from considering the adoption of clinical guideline to successfully implementing it is a non-linear process characterized by multiple setbacks and unanticipated events.[12]

Formal dissemination programs are more effective if they:

1. Take account of the needs and perspectives of the targeted adopters, particularly the balance of costs and benefits;
2. Tailor strategies to the demographic, structural, and cultural characteristics of different subgroups within the targeted organization;

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[8] Ibid.
[9] Haynes RB, Davis, DA, McKibbon A, et al. A Critical Appraisal of the Efficacy of Continuing Medical Education. JAMA 1984; 251: 61-64.
[10] Davis
[11] Greenhalgh T, Robert G, MacFarlane F, at al. Diffusion of Innovations in Service Organizations: Systematic Review and Recommendations. Milbank Quarterly 2004; 82: 581-629.
[12] Ibid

3. Craft messages with the appropriate style, metaphors, and images;
4. Use appropriate communication channels; and
5. Include rigorous evaluation and monitoring of defined process and outcome measures.[13]

A practice organization is more likely to implement an innovative clinical guideline if it is characterized by:

- A large size, maturity, and functionally divided semi-autonomous units;
- Specialized subunits housing particular professional knowledge;
- Reserve resources or capacity;
- A decentralized decision-making structure;
- Leadership that is strong, proactive, inclined toward information sharing, and committed over the long term;
- Well-developed inter-professional teams;
- Clear strategic vision;
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- Visionary staff in key positions;
- A culture conducive to risk taking; and
- Effective data systems.

Organizational readiness to change is enhanced by a widely held perception that the current situation is intolerable. Other factors that improve the chances of the successful assimilation of an innovation include broad staff support, adequate and continuing resources devoted to the adoption effort, and the capacity to evaluate the innovation.

A practice's decision to adopt a new clinical guideline is influenced by the intention to do so by comparable practices. The influence of other organizations is tied to the extent to which a practice is networked with other practices. For example, it may be easier to implement a clinical guideline with the physician practices that belong to ProHealth than independent practices.

Program framework – Systems theory

In contrast to the traditional approach to changing provider behavior, this proposal starts at the systems level. Individual provider behavior is viewed as embedded within a practice systems composed of a complex network of relationships.

Although the dissemination of information is an essential component of systems change, by itself information is incapable of bringing about significant change. Health care is delivered through complex networks of functional relationships between individuals in multiple disciplines. The function of individuals within a health care system is determined more by the characteristics of the system than by individual characteristics, including an individual's knowledge base or competency sets. Delivering information, even when it can be shown to enhance individual competency, is rarely enough to bring about significant system change. Health care systems, like all living systems, resist change (i.e., are characterized by homeostatic mechanisms). Systemic resistance to change is reflected in the fact that it takes 17 years on average for NIH research findings to become standard clinical practice.

Systems theory provides guidance in how the UCHC Academic Detailing Program can go beyond the dissemination of information to bring about change within practice systems.

- *Establish ongoing relationships with provider organizations.* Systems change cannot be brought about by someone who is not part of that system. UCHC Academic Detailers will establish ongoing

[13] Ibid

relationships with its primary target audience. Academic detailing involves one-on-one visits by a trained detailer with a clinician in the convenience of his or her office to discuss evidence-based, unbiased clinical information.

- *Identify and coach opinion leaders on their role in bringing about systems change.* System change is brought about by leaders who have a clear vision of enhanced function, who have strong personal connections throughout the organization, and who remain non-reactive in the face of resistance. Academic detailers can provide practice leaders with a basic grounding in systems theory and coach them in bringing about change in their practice systems.
- *Where indicated, support continuous quality improvement projects within health care organizations.* Properly done, performance improvement is consistent with principles of systems change. Most ambulatory health care facilities lack the internal resources to conduct bona fide performance improvement projects without assistance.

Academic detailing

Academic detailing is a face-to-face educational encounter with office-based clinicians by specially trained representatives. It evolved from observations of pharmaceutical detailing and was originally called "counter detailing."[14]

Although the body of well-designed research on academic detailing is thin, the existing evidence suggests that it is relatively effective in producing behavior change.[15] University-based academic detailing has been evaluated in randomized, controlled trials for a number of clinical conditions and found to both improve quality and reduce costs.[16] In addition, clinicians are generally receptive to face-to-face counseling.

Based on a review of the research evidence, an effective academic detailing program embodies the following component activities.

- Identifies the clinical issues of concern based on explicit criteria, such as practice variation, patient outcomes, resource utilization, the availability of clinical guidelines based on systematic reviews of randomized trials with consistent results, and opportunities for improvement.
- Precisely defines areas to be addressed and specific behaviors to be encouraged or discouraged.
- Provides clear, practical alternatives to behavior that is being discouraged.
- Incorporates into program design various "non-scientific" factors that contribute to clinicians' decisions such as attitudes to patients or diseases, habits, peer influences, patient demands, time constraints, and economic incentives.
- Establishes and maintains credibility conferred by an unbiased entity promoting evidence-based guidelines
- Uses health plan administrative and Medicare data to target interventions to high volume physicians relative to the clinical issue being addressed
- Involves opinion leaders and early adopters in the design and implementation of the program.
- Presents both sides of the issue upfront.
- Engages the clinician in a two-way conversation in order to relate the message to the beliefs, needs, values, interests, and learning style of the individual clinician and to elicit clinician concerns about the recommended behavior change.
- Assesses clinician readiness to change and target interventions accordingly.

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[14] Soumerai

[15] Thomson O'Brien MA, Oxman AD, Davis DA, et al. Educational outreach visits: effects on professional practice and health care outcomes. The Cochrane Database of Systematic Reviews 1997, Issue 4. Art. No.: CD000409. DOI: 10.1002/14651858.CD000409.

[16] Soumerai

- Repeats a few major points using both visual and verbal messages
- Reinforces improved behavior with feedback.
- Provides reinforcement in subsequent visits
- Directs incentives to all involved personnel: nurses, receptionists, physicians, PAs, NPs, etc.
- Uses concise, well-illustrated materials that emphasize the main clinical recommendations
- Ensures adequate initial and ongoing training of academic detailers and include role playing of all new messages.
- Completes detailed encounter forms after each visit.

Furthermore, successful academic detailers embody the following characteristics:
- Credibility in the eyes of the targeted providers;
- Inclined to develop strong interpersonal relationships with the targeted providers;
- Able to empathize with the provider's perspective;
- Able to communicate the provider's needs and perspectives to the authors of the clinical guidelines; and
- Able to work with the providers in making independent decisions about the clinical guideline.[17]

Program description
A UCHC Academic Detailing Program will be established within the Connecticut AHEC Program Office. The Connecticut AHEC Program was established at UCHC in 1995, and provides continuing education programs in multiple formats to a wide variety of health professional audiences. It is the largest single provider of continuing medical education at UCHC. It has developed a rich network of relationships throughout the state through its four centers, which are located in the Norwich, Hartford, Waterbury, and Bridgeport areas. AHEC Program staff worked closely with the medical directors of five of the health plans in implementing medical student continuous quality improvement projects in their Student Continuity Practice sites.

Staffing - The UCHC Academic Detailing Program will be staffed by a Program Director, Policy Analyst, four Academic Detailers, an Evaluator, and an Administrative Program Assistant. A brief description of each staff position follows.

The Program Director will provide overall leadership and supervision of the Academic Detailing Program. He or she will be responsible for the details of program design, implementation, and evaluation. The Program Director will coordinate the activities of the two advisory committees. The Program Director will report to the Director of the AHEC Program.

The Policy Analyst will be work with the advisory committees in identifying clinical issues that will be addressed and in researching, promulgating, and modifying the clinical guidelines that will be used in the program. He or she will work with the Academic Detailers in reviewing and modifying clinical guidelines based on feedback from physician practices and will assist the Detailers in devising strategies to overcome identified barriers to guideline implementation. The Policy Analyst will work with the Evaluator and applications developers in designing data collection tools. The Policy Analyst will report to the Program Director.

The four Academic Detailers will be responsible for conducting the day-to-day outreach activities. The Detailers will receive basic training related to their academic detailing function and specific training related to the clinical guidelines that will be the subject of their clinician visits. Based on the particular clinical issue, they will visit and develop an on-going relationship with providers and others at the

[17] Greenhalgh

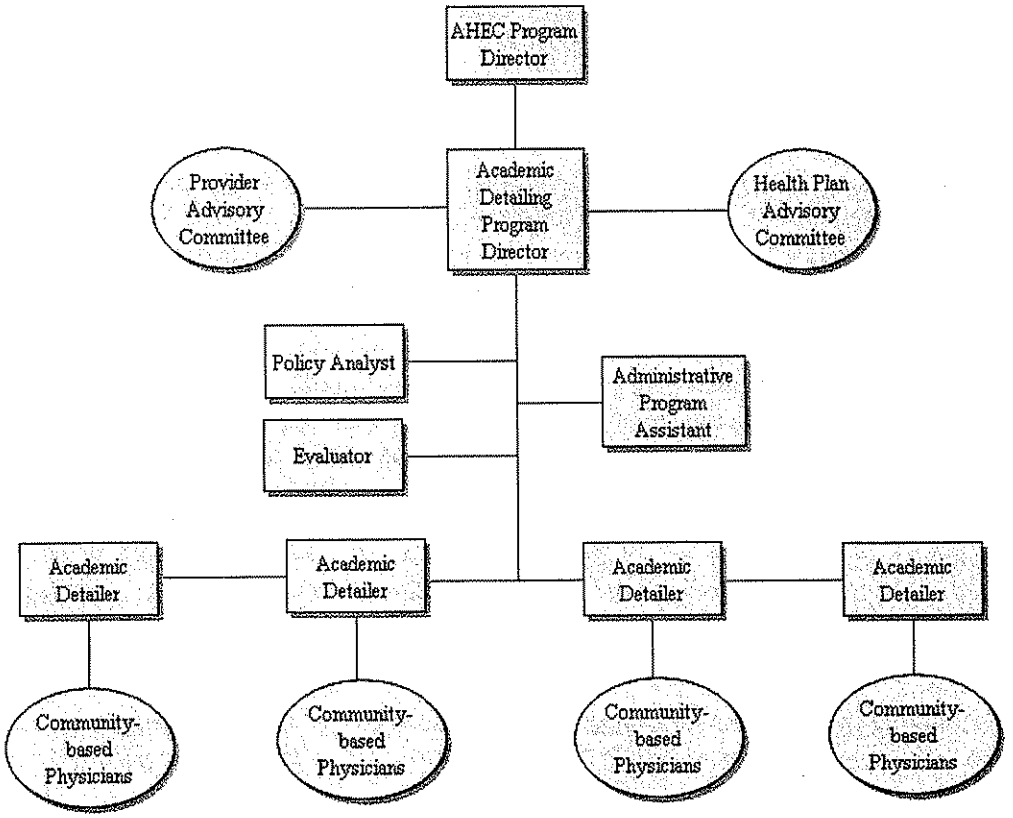
targeted physician practices. They will work over time with the physician practices to identify and overcome barriers to guideline implementation. The Academic Detailers will keep detailed records of their contacts with physician practices. The pre-requisites for the Academic Detailers include clinical experience, familiarity with the organization of physician practices, and the ability to relate well to the professional and administrative staff members of physician practices. Advanced practice registered nurses and physician assistants with at least five years of clinical experience are likely candidates for these positions. The Academic Detailers will report to the Program Director.

The Evaluator will design and implement the ongoing evaluation component of the program. He or she will oversee the root cause analysis, program design, and the identification of process and outcome measures. The Evaluator will work with the Policy Analyst in designing data collection tools, collating data from the Academic Detailers, and analyzing data. He or she will work with the Health Plan Advisory Committee in developing and collecting process and outcome measures from health plan administrative data sets. The Evaluator will identify and pursue opportunities for sponsored research and publication relative to the activities of the UCHC Academic Detailing Program. The Evaluator will report to the Program Director.

The Administrative Program Assistant will provide overall administrative support to the program. He or she will assist the Program Director, Policy Analyst, and Academic Detailers with routine tasks such as copying, printing, meeting minutes, report preparation, telephone coverage, and other task as assigned. The Administrative Program Assistant will report to the Program Director.

Advisory Committees - The UCHC Academic Detailing Program will depend heavily on the active involvement of the Provider and Health Plan Advisory Committees. The adoption of clinical guidelines depends heavily on their acceptability to providers. In addition, ensuring the evidentiary rigor of clinical guidelines will require the involvement of clinical experts in a variety of specialties. Clinicians from both within UCHC and from the community will be invited to serve on the Provider Advisory Committee. The health plans in Connecticut are among the key stakeholders for this proposed program. They have important resources to lend to the program and they are among the program's chief beneficiaries. Health plans have a valuable perspective on the clinical issues that should be addressed, and through their administrative data sets have the ability to target physician practices and provide data related to process and outcomes measures. All of the health plans in Connecticut will be invited to provide representatives to serve on the Health Plan Advisory Committee. Other relevant organizations such as Qualidigm, which is using an academic detailer approach for some of its programs, will be asked to participate in an advisory capacity.

The organizational chart below provides a basic schematic of the working relationships for the Academic Detailing Program.



Training – Initial training of the Academic Detailers will address their educational outreach functions. To the maximum extent possible, training curricula and materials will be drawn from those developed by previous academic detailing programs or pharmaceutical detailing programs. Training will include videotaped role playing with extensive feedback. Training will also be provided in quality improvement, health communication, and systems thinking. Ongoing training will be provided regarding each clinical guideline that is being promoted by the program. Expert consultants will be retained for each guideline to ensure that the Academic Detailers are conversant in the research base for each guideline and to provide Detailers with advice in working with practices to modify guidelines for local use. The presentation of each guideline will be pilot tested before the Detailers approach the target practices.

Academic detailing program – The academic detailing program begins with the identification of criteria with which to select the clinical issues that will be addressed. Possible criteria include disease prevalence, resource consumption, the availability of an evidenced-based and broadly accepted clinical guideline, data indicating opportunities for substantially improved clinical performance, readily identifiable physician providers with sufficient volume to assess improvement, and the availability of process and outcome measures. Both the Providers Advisory Committee and the Health Plan Advisory Committee will assist in the development of these criteria and the application of criteria to the selection of clinical issues.

To the extent possible guidelines will be selected from the existing literature. Each guideline will be subjected to an extensive review by both advisory committees and through pilot testing and will undergo modification to ensure its appropriateness for local use. Agreement on a single clinical guideline for each clinical issue will be sought from all of the health plans participating on the Health Plan Advisory Committee. A range of training materials will be developed for each guideline. Training materials will be individually targeted to the appropriate members of the health care team in each physician practice. Based on feedback from physician practices, guidelines and their associated training materials will be

modified accordingly. Training materials will also be produced in a variety of formats to accommodate different learning styles (i.e., auditory, visual, kinesthetic). In addition to training materials, implementation aids will be developed and disseminated. Implementation aids may include patient flow sheets, reminder cards, and patient education materials.

Academic detailers will conduct outreach visits to physician practices that have been specifically targeted according to the clinical issue being addressed. The targeting of physician practices will be accomplished through health plan administrative data sets or other sources such as Medicare and the Folio Physician Database. Careful consideration will be given to the criteria by which clinicians are targeted for each clinical issue. General criteria will include having a sufficient number of patients whose care involves the specific clinical issue and some indication of an opportunity for improved performance. To the extent possible, a set of matched control physicians will be identified at the same time as the intervention practices. Each academic detailer can make three to eight visits per day, and face-to-face time with the clinician generally lasts ten minutes or less. Based on the assumption that each Academic Detailer can average six visits per day, four days per week, 46 weeks each year, a projected total of 4,416 annual educational visits will be made per year. Because each clinician will be visited by an Academic Detailer on several occasions over the course of a year, the number of community clinicians actively involved in the program at any one time will be between 350 and 500. One day each week will be set aside to allow the Academic Detailers to compare notes, identify common barriers, and consult with the Policy Analyst and Director on strategies to overcome barriers.

The Academic Detailing Program staff will work closely with the UCHC Office of Continuing Education to ensure that community providers received CME credit for their participation in the program.

The particular data elements that will be collected for evaluation purposes will be determined by the process described in the evaluation section below. The main data sources will include the contact logs maintained by the Academic Detailers, abstractions from electronic and paper-based patient records, and health plan administrative data sets. Contact log software will be developed specifically for the program, and the Academic Detailers will be equipped with lap top computers that can wirelessly transmit data to a centralized database maintained by the Policy Analyst. Process and outcome measures and data sources will be identified for each clinical guideline. To the extent possible, health plan administrative data sets will be mined for this purpose. When necessary, clinical data related to both the processes of care and patient outcomes will be abstracted from patient records. All necessary Institutional Review Board approvals will be obtained.

In addition to fostering the adoption of clinical guidelines, the Academic Detailers may play a role in bringing faculty development programs directly to UCHC community-based preceptors. Furthermore, the Academic Detailing Program might be pilot tested by targeting organized groups of community-based physicians such as UConn Health Partners or ProHealth.

Evaluation

A rigorous evaluation component will be fully developed before implementation of the Academic Detailing Program. Evaluation and research support will be provided by the UCHC Center for Health Services Research.

The overall evaluation strategy will be guided by the three-step process described by Renger and Titcomb.[18]

[18] Renger R, Titcomb A. A Three-Step Approach to Teach Logic Models. American Journal of Evaluation 2002; 23: 493-503.

1. The first step involves a root cause analysis of the underlying problem addressed by this proposal: the suboptimal implementation of evidenced-based clinical guidelines in physician practice. A root cause analysis yields a visual representation of the relationships between antecedent conditions and the underlying.
2. The second step generates detailed program elements targeting specific antecedent conditions.
3. The final step identifies evaluation measures and data sources related to all programmatic elements.

Generally, evaluation measures will include detailed documentation of the activities of the Academic Detailers through contact logs, assessments of physician practice behavior through health plan administrative datasets and abstraction of data from electronic and paper-based patient records, and patient outcomes from the same two sources.

Because the existing body research on the effectiveness of continuing education, implementation of clinical guidelines, and academic detailing contains a paucity of well-designed studies, an academic detailing program offers a rich set of research opportunities related to the translation of research into practice. Maximizing the contribution of the research program requires keen attention to the following methodological issues:

- Randomization of clinicians to one or more intervention groups and a control group,
- Clearly defined, replicable, and measurable interventions designed to improve clinician behavior and patient outcomes,
- Assessment of the impact of interventions from objectively observed clinician performance or patient outcomes,
- Assessment of outcomes for the preponderance of study participants over sufficient periods of time to determine initial and sustained behavior change, and
- Sufficient data for statistical analysis.

Budget

The budget below illustrates the projected direct costs over the first three years of the program. A phased implementation is assumed in the first year. Salary amounts for the Director, Evaluator, and Administrative Program Assistant are for nine-months, and for the Academic Detailers and Policy Analyst the salaries are for six months.

As noted in the Evaluation section, much interest has been generated in the area translating research into practice. If designed with sufficient rigor, the UCHC Academic Detailing Program should attract significant external funding to evaluate its effectiveness and cost effectiveness. Prospective funders include the National Institutes for Health, the Agency for Healthcare Research and Quality, and the Donaghue Foundation. Should the program prove successful, it would be reasonable to approach the health plans operating in Connecticut about supporting it financially.

UCHC Academic Detailing Program
Proposed Budget (Direct Costs Only)

	Year 1	Year 2	Year 3
Salaries			
Program director (1.0 FTE)	90,000	120,000	123,000
Policy analyst (1.0 FTE)	40,000	80,000	82,000
Academic detailers (1.0 FTE) ($105,000 x 4)	210,000	420,000	328,000
Administrative program assistant (1.0 FTE)	33,750	45,000	46,125
Evaluator (0.5 FTE)	45,000	60,000	61,500
Subtotal	$418,750	$725,000	$640,625
Fringe benefits (35%)	80,413	253,750	224,219
Subtotal	$80,413	$253,750	$224,219
Equipment			
Desktop computers ($1,500 x 3)	4,500	0	0
Laptop computers ($2,400 x 4)	9,600	0	0
Printers ($500 x 4)	2,000	0	0
Blackberry devices ($250 x 6)	1,500	0	0
Subtotal	$17,600	$0	$0
Computer programming			
Data tracking applications development	5,000	1,000	1,000
Subtotal	$5,000	$1,000	$1,000
Consultants			
Training consultants	15,000	5,000	5,000
Data abstractors	0	30,000	30,000
Statistician	0	10,000	10,000
Subtotal	$15,000	$45,000	$45,000
Educational materials			
Clinical guidelines	30,000	50,000	50,000
Electronic media production	15,000	15,000	15,000
Subtotal	$45,000	$65,000	$65,000
Administrative expenses			
Telephone and network charges			
Telephone	25,000	3,600	3,600
Network	2,000	3,060	3,060
Printing and copying	2,000	3,600	3,600
Meeting expenses	12,000	25,000	25,000
Subtotal	$41,000	$35,260	$35,260
Travel (in-state)			
4,416 visits ($.485 per mile x 40 miles per visit) (Note: 1,500 visits in Year 1)	29,100	85,670	85,670
Subtotal	$29,100	$85,670	$85,670
TOTAL	**$651,863**	**$1,210,680**	**$1,096,774**